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## ETHNIC FACTORS AND THE MOVEMENT OF POPULATION.

A CENTURY of active investigation, speculation, and census-taking, closes without arriving at any satisfactory statement of the laws governing movements of population, although during this entire period the increase or decrease of population numerically has been a matter of intense interest. Beginning with Malthus's discussion of the economic bearing of such movements, the theory of population has received refinement and elaboration in the writings of Darwin and Spencer, and has at last fallen into the hands of a numerous school of anthropo-sociological writers, who have undertaken to bring over into the social sciences the principles of evolution developed in the natural sciences of biology and anthropology. By these writers it has been prophesied that anthropology will "revolutionize the political and social sciences as radically as bacteriology has revolutionized the science of medicine." Anthropology has been destined by anthropologists to work in the social sciences a transformation like that worked upon the statue of Pygmalion, breathing into them the breath of life; destined to lay hold upon those vital laws which have "eluded the grasp alike of theorists and investigators," and to furnish "a scientific explanation of the historical development of civilizations, by showing them to depend upon the processes of biological evolution." All this anthropology has been destined to achieve by developing the "idea of the ethnic factor in society," and insisting upon the importance of that factor in determining social progress.

The success of this new philosophy has been dramatic, and, to continue the simile, its performance has been wonderfully well and cleverly "papered," so that its preten-

sions have set the world of sociologists aghast for the time being. It would seem, however, that students of social phenomena are at last composing themselves to ask whether the breath of life which anthropology has undertaken gratuitously and somewhat ostentatiously to breathe into their science will prove to awaken any new vital energies, and accomplish the transformation, as billed in its announcements, and whether the factitious heaving of the social chest is not too obviously dependent upon diligent working of the anthropological bellows,—whether, in short, the breath of life is not, after all, merely a mechanical manipulation, unrelated to any social functions whatever.

Anthropologists have professed to ground the social sciences in the natural sciences, and to interpret social phenomena as phenomena of the natural world in terms of natural science,—“transmission,” “selection,” “natural law,” “natural evolution.” The social sciences are not for them sciences of man living in society, but of natural races entering in as ethnic factors to compose populations, and all social phenomena are phenomena of race. The social sciences are reduced to one science of ethnic factors and of ethnic generation and character. Even the dynamic factors of social evolution are ethnic. Rewritten in the light of modern anthropology, economics becomes a science of the generation of the man behind the machine; he is the prime motor in economic activity; and this prime economic motor is ethnic, a natural dynamic, race-begotten. The point of view, it will be observed, is altogether modern. It introduces the idea of sequence, of evolution and development; and it substitutes that idea for the superficial conceptions of the orthodox economists. The economic man, that manikin of the early English economists, is here endowed with all the attributes of a human being, and becomes generic with the whole natural world, inheriting and transmitting his economic endowments.

## I.

Population movements during this century have been chiefly, one may say almost wholly, an economic consequence. The advance in medical science has enabled communities to stamp out and control the ravages of contagious diseases in crowded urban centres of population, has made the devastations of plagues matters of history, and generally reduced mortality rates and increased the mean duration of life, so that economic tendencies have been left free to work their natural effect. The modern industrial régime has created a demand for population, and that demand has been satisfied. The economist therefore associates the increase in population with the increase in the efficiency of labor to produce the necessities and comforts of life; and he does not find it difficult to account for that increase by noting economic development and modern industrial conditions. The two great tendencies of population — (1) to increase its numbers, (2) to increase its per capita consumption of economic goods, material and immaterial — have had freer play than ever before. Taking the population as a whole, it has not been requisite for it to choose whether it would yield to one or the other tendency. It has indulged both tendencies. Wealth and population both have increased phenomenally, so that the social problems of the century are primarily problems of population and of wealth distribution.

Since Malthus wrote his essay, these problems have demanded an ever-increasing share of the economist's attention. Problems concerned with the distribution of wealth are seen to be, in the last analysis, problems of population. The older generation set forth this fundamental relation in the wages-fund theory,—that wages depend on the relation of the wage-earning population to the amount of wealth. This fundamental principle is not materially

modified when the modern economist substitutes the law of increasing returns in certain economic activities for the law of diminishing returns. It still remains true that the individual share is a function of population, whether the law be stated as one of increasing or of diminishing returns, in industry as well as in agriculture. In the phenomenally rapid growth of population during this century the economist finds one of the ultimately determining factors in every income, whether that income be in the nature of wages, interest, or rent. Any movement of population, or of the several industrial groups relatively to one another, causes a reapportionment of the product of industry.

The earlier theories of population have been so often and so elaborately restated as to require no detailing here. That population tends to increase, and that the ultimate limit to that increase lies in the means of subsistence, recommends itself as a bit of practical common sense. It is true of the individual that his existence is conditional upon the acquirement of a certain amount of food, clothing, and shelter; and it requires no mental effort at all to see that this is true also of individuals taken collectively, — that is to say, of the world's populations. To many it appears to be equally a matter of practical common sense that *movements* of population are determined by wealth movements, and some fixed relation is assumed. Such an assumed fixed relation received scientific statement first in Malthus's essay. That there is some interrelation would seem to be sufficiently evidenced in the fact that the increase of wealth and of labor efficiency which has characterized the economic development of this century has been accompanied by an unprecedented increase in population, which relates itself more or less directly with the movement of wealth and of wages. But how these movements have related themselves to one another requires an elaborate analysis of conditions, which cannot

fail to demonstrate the inadequacy of any such simple conception as that stated by Malthus.

No simple statement can be made which holds true of population as a whole and of the several industrial and social groups composing the population. Of entire populations it is true, as of individuals, that the standards of living are very different from one another, but those standards are not simple nor comparable. How, for example, shall we compare oriental populations with those of western Europe? Moreover, it is equally true of groups within any one population that the standard of living maintained within any one group is peculiar to itself, and does not hold for any other group. Within these groups individual standards of living adapt themselves to individual preferences and capacities, subject to certain pretty definite maximum and minimum limits, above and below which the individual standard may not normally move, so long as the individual remains a member of his group. Taking all groups together, the range of individual standards of living maintained within any considerable population is indefinitely great, running into poverty and dependence on one side and on the other into luxury and opulence. For the population as a whole, therefore, the standard of living maintained is a very composite standard of standards themselves composite; and it is this diversity of material standards of living maintained within the several social and industrial groups in any community which makes impossible any such simple interdependency of wealth and population movements as that set forth by early economists. The movement of population ceases to be a function of the increase or decrease of wealth; and for any group which has raised its standard above the subsistence point, increase in members ceases to bear any fixed relation to the means of subsistence or amount of wealth in general.

It would appear, indeed, that there is a point above

which any further increase in material resources, by offering more diverse avenues of enjoyment and activity to the individual, tends more and more to draw off and absorb his energies in a self-centred æstheticism, which may be likened to the seedless flowering of an overfed hot-house plant that has ceased to be self-perpetuating. We are not even yet in a position to say definitely whether the increase in wealth and productive power and of labor efficiency is followed normally by increase of population or the reverse. Historical data and biological argument squint, seeming to support either conclusion indifferently; while, of the various theories of population which have been enunciated from time to time since Malthus wrote his essay, it may be said that their mutually antagonistic assertions are an evidence of the obscurity in which the whole problem of population and subsistence has rested, and an evidence of the multiplicity of influences which must be taken into consideration. And from the diversity of laws, elaborated by more recent writers in different countries, it may be further inferred that the actual laws governing the movement of population are themselves not absolute, but are relative to race, time, and place under consideration,—relative, that is to say, not solely to material welfare of a population (it appears, indeed, that they are often quite independent of that), but relative to the entire plexus of social, industrial, and political organization and status. The experience of the century yields instances of populations living under every variety of material conditions, and manifesting under these conditions no uniformity of wealth and population movements.

Such interdependence, in so far as it exists at all, is true not of population as a whole, but only of certain groups within a population,—of those groups or that group whose standard of living is lowest, purely material, and at the subsistence point. Obviously, for those groups or classes whose standards begin to include more or less

intangible and æsthetic satisfactions,—leisure, for example,—the movement of wealth ceases to bear directly upon vital activities. These groups, which comprise pretty nearly the whole population, have escaped from the limitations set by means of subsistence. Hence their numerical progress comes to relate itself to other than those material goods which compose the community's wealth. By just so far as its standard of living rises above the subsistence point, the group is freed from dependence upon wealth movement, and for those classes within any community which enjoy ample incomes, the non-material æsthetic satisfactions come to be the very items themselves in which the group finds its progress, even its numerical increase or decrease conditioned. So that inferences based upon wealth movements alone have become insignificant and misleading.

The fear imminent in the minds of early economists, lest population outstrip its own economic efficiency to produce the means of subsistence, has been dissipated by industrial progress, and has even been displaced by a fear equally ominous and melodramatic, lest selfish individualistic tendencies, fostered in the accumulation of material resources, shall unduly restrict the increase of population, or at least of certain social groups. Malthus conceived population to be practically always pressing upon the means of subsistence, naturally tending to increase more rapidly than the means of subsistence; and he found the natural consequence of this pressure in war, famine, pestilence, and disease. Darwin pointed out that such agencies were nature's universal agencies for killing off the unfit and selecting the fit. Spencer found in the self-seeking individualistic tendencies, which come to absorb more and more of the individual's energy and devotion, powerful neutralizing agencies interfering with the Darwinian process of natural selection. But none of those writers sounded the depths of modern pessimism



which is all-embracing, and finds its ultimate refinement in a fusion of the several theories of population enunciated by Malthus, Darwin, and Spencer, and in the assertion that, under modern conditions of social selection, it is the unfit and the economically inefficient who are free, and who tend to multiply in accordance with the Malthusian doctrine, and to crowd out the fittest; while, on the other hand, the energies of the fittest are more and more absorbed in their efforts to maintain their own individual social standing, and to rise higher in the social scale, so that they work out their own annihilation.

We are concerned here with one aspect of this *fin-de-siècle* pessimism; namely, with that consummate elaboration of it which is grounded in anthropology, and in the assumption that economic progress in any community tends to dissociate certain ethnic factors in population.

The special product of the modern industrial system appears to be what is commonly designated the "factory population." This element in the population, which hardly existed a century ago, has come to constitute a numerous factor; and, if we ask how this has come about, we are face to face with a very perplexing problem. Opinions rest ordinarily upon one or the other of two assumptions, which may be briefly stated as follows: (1) that the factory system has reduced the miscellaneous elements of our industrial population, the handicraftsmen and skilled laborers, to the ranks of the unskilled; or (2) that the factory system has enabled the originally unskilled and inefficient element in the population to increase and multiply.

All conditions concerning the general welfare and progress of our industrial population may be reduced to one or the other of these theses: one asserting the enslavement of a larger and larger numerical factor in our population; the other, amelioration and progress of a more or less submerged and inefficient element in the original popula-

tion. Those who hold the latter opinion ordinarily explain the apparent numerical increase of the unskilled on the ground that this increase is apparent, but not real, the appearance being due to the aggregation of the unskilled, originally disseminated throughout the population, in industrial centres, where they constitute a more or less conspicuously isolated group. In its simplest form, the question resolves itself into the following dilemma: whether the factory population of to-day is lineally descended from the artisans of yesterday, or from a more or less generally diffused, unskilled, and inefficient element in the original population; whether, in brief, the great industrial revolution of this century has raised a submerged tenth a point in the social scale, or has reduced other elements in the population to a uniformly low standard of material and social welfare. The adoption of one or the other of the above theses, as on the whole giving the truest summing up of the industrial revolution, does not, of course, involve a denial of the very obvious fact that both processes have been going on together, and which of the two is accepted as the truer summing up will depend a good deal upon individual animus and sympathies.

This industrial group has certainly grown by accession; like the population of a great city, it has drawn unto itself and subjected to its conditions of uniformity elements of all kinds in the population. It has absorbed the skilled handicraftsman, the small manufacturer and tradesman; and it has lifted into its ranks and made self-supporting the economically inefficient. Unlike our great urban populations, however, the factory population has manifested a high rate of natural increase. It has enabled those reduced or raised to its ranks to generate their own kind under less exacting conditions than those under which the socially "more fit" generate their own kind.

It follows that the growth of population during the century may be resolved into the rapid numerical increase of

this industrial group within the population, either by accession or out of its own natural movement, or both; and, since that growth is an economic consequence, the economist is particularly interested in the anthropological implication that it can be interpreted in terms of ethnical factors.

Anthropologists have performed one great service in calling attention to the selective agencies at work in every community, and in insisting that it is not the absolute increase or decrease of a population in numbers that is of significance; that real significance attaches to the *character* of the population. What is significant is the movement of social classes relatively to one another,—the nature of the selective agencies at work. When it becomes apparent that about one-half of a generation fail of representation in succeeding generations, it becomes of prime importance to ascertain what is the character of the selection. Is it natural or artificial? is it confined to certain social classes, or does the selective process work out its ends in all classes alike? or, finally, is it a selection of ethnic factors?

It is to those selective agencies at work in society that anthropologists have directed their attention. In the following criticism of anthropological speculation it is not intended to question the fact that selective agencies are at work modifying the character of modern populations. But I propose to consider at some length the character of anthropological conceptions, and to show that the introduction of the idea of ethnic factors in any discussion of population movements, so far as it is at all significant, is wholly unwarrantable and hopelessly confusing when applied to modern industrial conditions. The chief selective agencies are admittedly economic, as already indicated; and economic selection has broken down, and everywhere tends still further to break down ethnic classification and selection or stratification.

## II.

Our whole problem, approached on its anthropological side, resolves itself into the difficulty of giving to the term "ethnic factor" any scientifically accurate definition. In view of their general attitude of mind, one would seem wholly justified in requiring of anthro-po-sociologists a clear explanation of their own meaning, when they employ that term. Yet for a quarter of a century its scientific definition has been a stumbling-block in their way. Little progress has been made even towards an abstract conception of what the term "race" or "ethnic factor" should denote; and, certainly, with regard to any concrete application of these terms,—either to the people composing the world's population at large or to the factors of European populations in particular,—it cannot be said that there is to-day any considerable unanimity of opinion among anthropologists themselves.

Such criticisms as anthropologists have brought against the common employment of the term "race" are generally admitted to be entirely justified. As commonly employed, that term has no scientific value, since it is employed on the one hand to distinguish mankind from the rest of the animal kingdom, as in the phrase "human race," while on the other hand it is applied to groups of population not at all ethnically differentiated, but living perchance under separate political systems or speaking a common language, as where the Swiss people are spoken of as a race distinct from the German or French or Italian races. Mankind has been generally conceived to be composed of several rather simple racial groups,—of red, brown, yellow, black, and white races, for example; and, if to this main classification be added the Esquimaux, the Australians, the Oceanic peoples, and such further refinement in treating of the white race as is suggested in the

terms "Aryan," "Indo-European," "Caucasian," "Germanic," and the like, our anthropology is brought pretty nearly up to date.

Not quite, however. In the last few years anthropology plumes itself upon the fact that it has been getting rapidly away from some uncritically simple notions.

The more common of the simpler classifications of population is that based upon language. Those who speak French are conceived to be of the French race, those who speak English of the English race. The Greeks, we are assured, were a race "speaking a common language." Latin races are those people whose language is more or less related to the Latin tongue. Such simple classifications may, to a certain extent, disregard political boundaries, but it is not an uncommon result for a people speaking a common language to come to have a common political organization, and, where the political grouping happens to coincide with differences in language, racial differentiation is pretty certain to be inferred by those unfamiliar with the history of race migrations.

Such inferences, it may be observed, find some semblance of justification where political institutions and social customs, as well as physical environment within political boundaries, have served more or less to modify the character of peoples subject to them. But although national types of character may have developed, where political boundaries have remained for a considerable period of time unchanged, political institutions have never in western countries been sufficiently permanent nor sufficiently isolating to develop entirely homogeneous populations; and the intermingling of races which in primitive times resulted as a natural consequence of military exploitation and possession continues unabated in peaceful migration and infiltration of races,—to-day a natural consequence of economic exploitation, of social advantages, or of political exigencies and administration.

This mobilization of the world's population is immensely facilitated by that breaking down of geographical barriers which has accompanied the opening of rail and water ways of communication, and by the extensive requirements of the commercial world. One consequence of these new conditions has been that national types of population have been losing even that sharpness of definition which they have sometimes manifested in the past.

Accordingly, one finds little warrant for making community of language or of political institutions, conjointly or severally, bases of ethnic differentiation to-day. Language migrates too easily from race to race, while political organizations exert an influence too impermanent to be of natural worth. Such classifications and groupings may suggest or even coincide with generic ethnic boundaries, but the coincidence is an accidental contingency.

Scientific value, if it attaches to any of the more popular tests of ethnic origin, attaches to that based upon pigmentation of the skin, for here, certainly, is a mark of natural differentiation. Each of the great color groups composing the world's population is, however, a composite of minor groups sufficiently differentiated from one another, homogeneous in character, and distinct in origin to warrant the application to them severally of the term "ethnic." What is popularly conceived as the "white race" is made up of diverse ethnic factors, and within each of the great color groups racial differentiation does not necessarily manifest itself in any color shading of the skin. Furthermore, groups ethnically homogeneous often manifest considerable variations in skin pigmentation, which may perhaps be attributed to climatic influences. We may have a kind of racial sunburn in the peoples of relatively dark complexion living in southern or tropical lands, and of racial bleaching out in the lighter peoples of the north. The direct influence of sun and wind upon skin texture and pigmentation is a fact of individual ex-

perience, the effects of which may easily be conceived to have become themselves permanently registered. Such an influence is, of course, exerted independently of racial lines or groupings, so that the color test of race origin has to be applied with great caution. On the whole, therefore, it must be admitted that even this test is too simple to be scientifically reliable or adequate as a test of generic origin.

Accordingly, modern writers do not accept any of the popular or pseudo-scientific conceptions of what constitutes an ethnic factor. Natural differentiation is something more than political organization, and is not necessarily indicated in language spoken nor in skin texture or pigmentation. And probably we have here reached the final statement upon which there is complete unanimity of opinion: all are agreed that ethnic character is in itself evidence of isolation, more or less complete, for a longer or shorter period of time; and all are agreed that this isolation is not scientifically determined in any of the above schemes of classification. The conditions of the development of ethnic character are such as to make any further definition of the term "ethnic factor" arbitrary,—a matter of opinion, upon which there is ample opportunity for disagreement, since *the exact amount of isolation necessary to develop ethnic character cannot be scientifically determined.*

So far there is perfect accord. None of the more careful writers are at all disposed to maintain that the simpler notions of the ethnic factor are at all adequate, and they have sought in anthropology a scientific account of such factors entering in to compose extant populations. The chief service of anthropology, however, seems to have lain in its destructive criticism directed against these naive conceptions of race. In its own conception confusion still reigns, and the intangible and imaginary character of its own conceptions is clearly in evidence in

its attempts at ethnical classification of European populations.

Anthropo-sociologists have undertaken to resolve European population into two or three dominant ethnic factors, which enter in to compose the several political groups in varying proportions, one or another element predominating and giving character to the whole population. The fusion in varying proportions of these ethnic elements gives rise to national types. The history of any political group of population establishes the fact that they are none of them ethnically pure. The French people are partly of Gallic origin, partly of Roman, and partly of Teutonic, each of these original factors being itself highly composite ethnologically. The Gauls, according to M. Levasseur, contributed to the formation of the French nation a "complexity of ethnological elements," the Romans "their language and civilization," and the Germans "their institutions and blood"; and there must be added to these elements the Spanish, Moorish, Ligurian, and Celtic populations, as well as the fragments of indigeneous races of prehistoric origin. Other European populations are no less complex ethnically.

The difficulty in the way of establishing generic lines in so heterogeneous a population as that of modern Europe is obvious. At what point in the differentiation of social character shall ethnic character be conceived to emerge out of the complexity of ethnological elements? We begin to get some idea of the anthropological conception in the statement of a recent writer that "in anthropology the term 'race' — alas! so often lightly used — corresponds in many respects to the word 'type' in zoölogy." \* By the same writer we find twice quoted approvingly Denicker's definition of the term. "Race," he says, is "in the present state of things an abstract conception, a notion of continuity in discontinuity, of unity in diversity.

\* Ripley, *The Races of Europe*, p. 59<sup>2</sup>.



It is the rehabilitation of a real but directly unattainable thing," or, to adopt Professor Ripley's terminology, race is an "ideality."

Let us see how far these definitions take us on the way to a clear comprehension of the term. Not far, it would seem. This unattainable ideality, this "continuity in discontinuity," "unity in diversity," circle-within-circle conception of race,—what does it signify? Obviously, before it can signify anything at all, we must know what this something is which is involved in this something else also undefined. Is the race, or ethnic, factor a group of one man or two? and what characteristics constitute a "type"? How far we have progressed becomes obvious when we reflect that a tree and a stone and a beast of the field are each severally within themselves "continuities in discontinuities," "unities in diversities," and, in our abstract conceptions of them, "unattainable idealities." So of everything else in the material world, as of the world itself. We are told that a race is an "hereditary type," but we are not told what a "type" is. To any definition of the term "type" all the difficulties attach which attach to a definition of the term "race" itself. In the statement that race is an "hereditary type," our only added notion, which lies in the term "hereditary," carries no content, since every essential capacity and character in a man is hereditary. Education may train and develop: it cannot endow character. Original capacities and traits are all of them inherited, so that we are not at all in sight of a definition of our term "race" or "ethnic factor" until we get a complete enumeration of those particular traits and qualities which, inherited, shall be conceived to constitute a "type." We are accordingly forced to take up the raw material out of which anthropologists have constructed their idealities, without any preconceptions as to what shall constitute a race, in the hope of giving to the term, as a result of more or less extended observation, some descriptive content.

A cursory examination of this raw material shows that anthropological races are physically differentiated idealities,—idealities constructed out of inherited physical ear-marks, such as color of hair and eyes, stature, facial features, and cephalic index. For the social anthropologists the chief race traits are tallness or shortness of stature, lightness or darkness of complexion, longness or roundness of head; and out of these they propose to construct the unities in diversities. There is (1) a tall, light, thin-nosed, long-headed race, (2) a short, dark or light (?), thick-nosed, round-headed race, and (3) a short, dark, thin-nosed, long-headed race.

Not that these races exist at all, but the ear-marks exist. In the extant population of Europe, anthropologists find these evidences of generic origin floating about and combining with one another indifferently. There are tall people who are dark, thin or thick nosed, and long-headed; and others who are round-headed. So of the short people: they may be light, thick or thin nosed, and long or round headed indifferently. All possible combinations exist, and on the whole some of the more irregular combinations seem to outnumber considerably the regular combinations. No one of the possible combinations of traits is without a considerable population; the more careful observers, indeed, find the mathematical possibilities insufficient to furnish them with a sufficient number of types, and are forced to have recourse to further differentiation. They find two sorts of longness: (1) that of the northern Teutonic peoples and (2) that of the southern Mediterranean peoples. There are at least two sorts of blondness: (1) the grayness of the Alpine stock and (2) the yellowness and blueness of the Teutons. Finally, the nose may have an indefinite number of features besides longness or thickness. Where any of these combinations fail to explain the character of a population or lead to classification obviously absurd or incon-

sistent with history or topography, the population must be set down as *sui generis* or an indigenous one, of which the Basques and certain populations in Brittany are examples.

Disregarding these little groups of isolated populations, which do not lend themselves easily to the anthropologist's scheme of classification, let us turn to the mass of European population and its ethnological constitution.

It has been observed already that there is no group of population in modern Europe which presents these marks of generic origin in any fixed combination. No relation can be established between stature *per se* and cephalic index or complexion or facial feature. Now it must be borne in mind that, inasmuch as there is ample evidence, statistical, historical, and physiological, going to prove that "no continental group of human beings with greater diversities or extremes of physical type exists" than the European population, therefore anthropology proposes to "do away at one fell swoop with most of the current mouthings about Aryans and pre-Aryans, and especially with such appellations as the 'Caucasian' or the 'Indo-Germanic' race." Having discarded these simple notions, the modern anthropologist sets about to determine ethnic composition in his own way. "In a given population," he asks, "are the blondes more often tall than the brunettes, or the reverse? Is the greater proportion of the tall men at the same time distinctly longer-headed or otherwise? and the like." \*

Upon the answer to such inquiries, modern anthropology bases its classification of European population. The data brought together here are of fundamental consequence in making the classification, and warrant careful consideration. Contrary to common opinion, anthropology does not find the answer to these inquiries to be "constant and

\* Ripley, *The Races of Europe*, p. 105. The whole of chapter vi. and Appendix D are of particular interest in this connection.

persistent.”\* In the face of the evidence gathered on this point, Professor Ripley is led to remark as follows: “Let it be boldly confessed at the outset that in the greater number of cases no invariable association of traits in this way occurs. This is especially true among the people of central Europe. The population of Switzerland, for example, is persistently aberrant in this respect. It is everything anthropologically that it ought not to be.” And we are urged to keep in mind that “in no other part

\* In Appendix E to Professor Ripley's *Races of Europe* we find a summary of the evidence got together on this point, which is sufficiently significant to be quoted at length:—

“It appears that, while normal associations of these traits [*i.e.*, head-form, stature, and blondness]—corresponding, that is to say, to our constitution of three ideal racial types—occur in the outskirts of Europe, no clear evidence of the law is offered in its central and most complicated part. Thus, respecting *head-form* and *stature*, Arbo in Norway finds the dolichocephalic individuals generally taller; and, in Italy, Livi asserts that the dolichocephalic individuals are shorter. In each of these cases, it will be noted, the associations are normal, since the long-headed type in Italy, if Mediterranean in type, ought to be less tall. Weisbach in Austria, and Salzburg also discover a normal Teutonic combination, the long-headed men being somewhat taller. The same is less clearly true in Poland (Elkind), in Aveyron (Lapouge-Durand), and in Valais (Bedot). In Baden, Ammon at first found his dolichocephalic men taller, as a rule; but his later work fails to confirm it. Among other observers, Ranke in Bavaria, Anutchin in Russia, Collignon in France, and Olóriz in Spain discover no relation whatever between the two traits in the same individual. Eichholz for Russia is also doubtful, and his data are in any case too limited to give reliable results in this matter.

“Turning finally to the association of *head-form* and *pigmentation*, again we find Arbo asserting a normal Teutonic relation in Norway. Dr. Livi also finds his dolichocephalic men of Mediterranean type darker in complexion, or rather in color of hair, as they ought normally to be. Von Hölder and Regel give evidence for Württemberg and Thuringia respectively to the same effect; namely, that their long-headed individuals more often than otherwise tend to be relatively light. Ammon, however, in his latest work, asserts it of the Savoyards, but gives no precise data to verify the statement. In Moravia, Matejka's figures for three hundred and ninety-five individuals show too slight a tendency to be of value. Most other observers discover no relation whatever between the two traits, dolichocephalic individuals being as apt to be light as dark. Among these are Ranke, for Bavaria; Anutchin, for Russia; Majer and Koperniki, for Galacia; Elkind, for Poland; Eichholz, for Russia; and Bedot, for Switzerland. Two observers, on the other hand, Weisbach in Austria and Emme in Russia,—the latter, however, with a very limited series of forty-one persons only,—find their dark individuals rather more long-headed.”

of the world save modern America is such an amalgamation of various peoples to be found as in Europe."

The extent to which this amalgamation of ethnic factors has taken place may be inferred from the following statement: "We are thus reduced to the extremity," writes Professor Ripley, "in which my friend Dr. Ammon, of Baden, found himself, when I wrote asking for photographs of a pure Alpine type from the Black Forest. He has measured thousands of heads, and yet he answered that he had not been able to find a perfect specimen in all details. All his round-headed men were either blond or tall or narrow-nosed or something else they ought not to be." Yet the Alpine race, of which Switzerland and the Black Forest are strongholds, is one of three great races into which it is proposed to resolve the heterogeneous population of modern Europe. The scholar whose name, perhaps, more than any other is associated with the sort of work we are considering, confesses that he has never found even one individual manifesting the several race traits in combination.

The anthropologist who admits that his races have no existence to-day has no cover at all, since, as he is quite aware, "history, and archæology long before history, show us a continual picture of tribes appearing and disappearing, crossing and recrossing in their migrations, assimilating, conquering, or being absorbed," so that our anthropological races not only do not exist,—we have no evidence that they ever existed; and there is no tendency certainly to-day towards isolation and the building up of pure-blooded ethnical groups of population in Europe, which indicates that these "races" ever will in the future succeed in associating themselves or in assembling their respective "traits."

All this seems at least to place the social philosophy of these writers upon a new footing. They are not any longer engaged with realities, but with subjective ideals.

Inasmuch as the anthropologist, on his own confession, cannot produce any considerable number of individuals—in fact, no single individual—who manifest in combination the race traits, the query naturally presents itself to those of a more or less sceptical turn of mind, How has he come to fix upon certain combinations rather than others? If one is to be relieved of all responsibility in the way of producing individuals, not to say groups of population, manifesting the combination of race traits selected, why not take any combination? or, rather, why take any combination at all? If it is not necessary to find the traits combined, may we not as well make our races tall-short races, light-dark races, round-long races, or races manifesting any other possible combination of traits?

In view of the inconclusive character of the evidence on this point, as indicated in the passages quoted above, the answer which the anthropologist makes to this query is highly unsatisfactory, since it assumes exactly that fixity in relationship of the several race traits which his data do not at all substantiate. "In one population," writes Professor Ripley, "color of hair and stature gravitate towards certain definite combinations. Not far away, perhaps in another thousand men drawn from the same locality, the same stature is found to manifest an affinity for certain types of head-form. It may require scores of observations to detect the tendency, so slight has it become. In still another thousand men, perhaps, a third combination is revealed. These all, however, overlap at the edges. Of course, we should be glad to find all our physical traits definitely associated in completeness in the same thousand recruits, were it not denied us." But the evidence summed up by Professor Ripley in the Appendix to his book all goes to show that (perhaps) we do *not* find any groups manifesting even such slight affinities as to "require scores of observations to detect the tendency." To assert that perhaps we may find these traits associated and

manifesting affinities for one another within populations at large begs the issue. Having shown that the evidence is inconclusive, the anthropologist proceeds upon the assumption that where in any population we have long-headedness there we find also associated *more* tallness and blondness and thinness of nose than we find where we have shortness of stature,—not individually associated, but floating about in the population as a whole, and so manifesting an “affinity”; and, where we have roundness of head, there we find *more* shortness, brunetness, and thinness of nose floating about similarly. And so the anthropologist constructs his combinations without reference to the individual, and has his ideality of two races. But the evidence cited does not bear out the assumption that such affinities exist; and, if they do exist, it must be borne in mind that they are confessedly empirical affinities, not associated under any known law. We are not told how a race defined to be an “hereditary type” can be constructed out of combinations of traits not at all fixed in transmission. We are told that it “matters not that never more than a small majority of any given population possesses even two physical characteristics in their proper association.” We even find anthropologists who go further, and require of their “small majority” that it shall possess only one single trait; namely, a high or low average cephalic index, the racial line being determined arbitrarily by the individual observer. Such a classification as this last makes up in consistency and clearness what it lacks in broadness and probability of relation to facts. It constitutes the cephalic index a test of race origin, and abides by that regardless of other traits. Doubt here attaches to the reliability of the test itself. Those who construct their ideality of race on a broader basis of four associated race traits, however, cannot be allowed to reason on the assumption that any two traits out of the four, when found associated in any individual, determine the ideal

racial character so constructed, since, obviously, where but two traits out of four conform there are an equal number of non-conforming traits. Where it appears that such individuals constitute only a "small majority" of the total population, there is still less ground for determining the racial character of the population than for the individual. Where the non-conforming traits are contradictory, obviously they exactly counterbalance the conforming traits; and, where they are neutral, they have no less value in determining racial character than the traits selected as typical.

Because the several selected race traits are themselves severally persistently transmitted from generation to generation, it does not, of course, at all follow that any particular combinations of these traits are so transmitted. As we have seen, no such affinity has been established. Anthropologists themselves cannot produce any conclusive evidence that a child inherits these traits in any combination or association fixed in heredity. The race traits "float" about freely, showing no hereditary affinity for one another: the affinity is at best merely an empirical one of juxtaposition. Where in any population the anthropologist finds a high percentage of tall individuals, and in that population also a high percentage of blond individuals, he concludes he has evidence of a tall, blond race-stock; and, if in the same population, he finds a high percentage of long-headness, he adds this trait to the other two. The majority of the population, as we have seen, may be neutral, or at most possess only one of these race traits. While no individual possesses all of them, that makes no difference: the population belongs to one or the other of the two or three great races, according as it manifests one or another of these "typical" traits in a relatively high percentage. The great majority of the population, being neutral, are disregarded. Disregarded, that is to say, in determining the race character of the popula-



tion; but, once that is determined in the manner above indicated, this great mass of neutrals is thrown in with the typical individuals, and the whole population declared to be of one or another race, for which the entire combination of traits is assumed.

### III.

The inconsistency of this assumed fixity in combination of traits for the race, with their complete freedom of association in the individual, is obvious; and it has forced the more logical anthropologists to modify their theory in its application, and to constitute a hierarchy of race traits where there is an incongruity of association. Certain relative values have come to be attached to the several tests of race origin. In substituting this hierarchy of tests, the fixity-in-combination ideal is clearly modified, if not altogether abandoned, exactly to the extent that this hierarchy is insisted on. For, if there is a fixity in association, one race trait carries the other race traits with it, if not in the individual, at least in the population as a whole; and, to the extent that fixity in combination obtains, one test of race origin is as good as another. It is found, however, that, for instance, in certain considerable groups of population, stature seems to have succumbed to environmental influences. Where food supply has been scant, growth has been stunted; and, where food supply has been abundant, stature has increased independently of race stock. Again, it is suggested, as noted above, that the color of the skin, and perhaps of the hair and eyes, may be more or less a matter of climatic environment, or, in some localities, of altitude. At least, as a test of race, complexion is somewhat fickle and erratic. In view of these facts, anthropologists have naturally come to regard stature, complexion, and, it may be added, facial features also, with suspicion, and have constituted the cephalic

index—the relation of the length of the head to its breadth—the surest test of race. Where other traits conform to the “ideality,” they are grouped around the cephalic index; and, where they are “what they ought not to be,” they are considered of secondary consequence or disregarded altogether.

Unfortunately, however, anthropology in its appeals to the cephalic index has overreached itself and proved too much, and has fallen into confusion as to what, after all, the cephalic index is an index of,—whether, indeed, it is an index of anything at all, and, if so, whether of race origin or of social selection.

The more usual method is to assume that the index is an index of race or of individual fitness to survive, according as one or the other assumption best fits into the argument in hand, and to shift the assumption to suit the immediate purpose. If we turn to one of the most illustrious of modern anthropologists, George Vacher de Lapouge, we shall find the cephalic index worked in its double function, now as an evidence of race, and again as an index of individual fitness to survive. On the evidence of the cephalic index chiefly, the population of northern Europe is apportioned by this author between two great races,—*Homo Europeus* and *Homo Alpinus*,—the dolichocephalic blond and the brachycephalic dark race. Here the cephalic index is an index of race origin. But, having done with the cephalic index as an index of race origin, the author proceeds to elaborate certain laws of social selection which he conceives to be at work within any population. He finds that the dolichocephalic are the more successful socially and economically, more progressive, more daring, and migratory. They are the wealth-holders and fighters. They seek the large cities, and leave their more brachycephalic brethren to live in the country districts. The child of dolichocephalic migrating parents is apt to be more dolichocephalic than either parent. The

dolichoid is prominent in politics, and in many other ways manifests individual qualities peculiar to him. Here the cephalic index is clearly taken as an index of individual efficiency, ability to survive, and of other individual characteristics.

It is not the intention here to examine the evidence brought forward in support of these several laws or of the general racial classification of population, but, accepting the generalizations as they stand, to ask whether they are consistent with one another.

Clearly, Lapouge's laws of social selection imply that the cephalic index varies with individual qualities of mind and character, that the relation of these qualities to the index is fixed. Those anthropologists, however, who are disposed to reserve the index as a test of ethnic origin, usually deny that there is any close relation between individual capacity and the index, as does Lapouge himself when he is establishing his race categories. Lapouge and those of his school point out that the genius of the race is much less evenly distributed among the dolichocephalic peoples than among the brachycephalic; that, if the brachycephalic peoples more seldom rise to the intellectual and moral heights attained by the dolichoids, neither do they sink to the level of animal stupidity maintained by certain social strata of the dolichocephalic peoples. When, however, Lapouge comes to develop his laws of social selection, the minutest variation in average indexes is sufficient to account for individual variation in temperament and efficiency. The laws are founded upon the narrowest margins of difference in indexes, and they depend upon an absolute fixity in relationship between individual variation of character and individual index. Such a fixity of relationship is clearly inconsistent with Lapouge's own theory of race differentiation, and he and other writers have got together a considerable mass of data tending to break down the belief that

any such fixity exists. Obviously enough, the cephalic index is at best only an ear-mark, in itself of no intrinsic value. It bears no relation even to the capacity of the brain cavity, which may vary indefinitely without any variation in the index. As if to give point to this fact, it happens that the two races which are, according to Lapouge and his followers, in all essential qualities most differentiated from each other,—namely, the dolichocephalic blond race and the Mediterranean race,—have each of them a low cephalic index and similar cast of countenance. So that the association of index with ethnical character is a matter of chance, and there is no relation of cause and effect. And it is still more difficult to conceive any such relation establishing itself in the individual between the relative length and breadth of the head and the capacity or fitness to survive. If the relation were one involving the weight or size of the brain, it might more conceivably bear some such fixed relation to individual variation.

Now the cephalic index may be an index either of ethnic generation or of social selection. It cannot be of both. If it be an index of individual capacity and fitness to survive, it cannot be accepted as an index of ethnic generation; and, if it be accepted as an index of ethnic generation, it cannot serve as an index of individual fitness to survive. In the one case, all of Lapouge's laws of social selection depending upon the cephalic index must be thrown over; and, in the other case, his whole classification of the European population into three races must be given up.

It may, however, be urged that the cephalic index is for the individual an index of certain qualities, and, when applied to races, an index of racial character. It is not essential to our purpose to examine the evidence which might be adduced in support of this view. It suffices here to note that race character is a very different thing from race origin. Even if we accept the cephalic index as an

index of character, which there would appear to be no very good grounds for doing, it throws no light on the generation of present populations. If two populations present one a low and the other a high cephalic index, on this theory we are not justified in assuming distinct racial origins, since the difference in present average indexes may very well be accounted for as a consequence of social selection. The low average index is evidence merely that the process of selection has worked itself out more completely in that population than in the population showing a high cephalic index. This would be a sufficient explanation, however marked the differentiation in indexes might be; and it would appear to be the simple and natural explanation, where the differences in index are so slight and uncertain as they are for European populations. Social selection and natural selection might easily have worked out each different results under the different conditions of social and physical environment which obtain within the continent of Europe. One need mention only one environmental influence at work which may easily be conceived to have occasioned a differentiation of the peoples of northern Europe from those of southern Europe;—what greater contrast can be found in physical environment under which populations survive at all than that between the climate and topography of the peninsula of Norway and Sweden in the north and of Italy in the south of Europe? Such diverse conditions might easily in a few generations, not to say centuries, develop differentiation in a homogeneous race stock. Professor Ripley seems to have clearly enough in mind the efficiency of environmental influences in bringing about physical transformations. “Who,” he asks, “can say that the originally broad-headed peasantry in Burgundy are not tall because of the surpassing fertility and material prosperity of the Côte d’Or, with the addition, perhaps, of a strain of Teutonic blood?” And, preserving the form in

which the question is here put, we may ask, Who can say that the differences in average cephalic indexes for different populations are not due to the uneven working of Lapouge's laws of social selection in different populations?

It is not contended here, however, that differentiations of the various racial types in Europe may be set down to environmental influences, but only to suggest possible factors in the generation of group characteristics. And this leads directly to one other criticism which must be brought against the natural philosophy of modern anthropology in its attempt to define the ethnic factors in European populations. Anthropology tries to eliminate all environmental influences which may have modified the physical types of population. Its races are hereditary, and its philosophy is genealogical. The question of race is not one of differentiation, but of generation. The attempt is to follow strains of blood, and "to eliminate all modifying influences of environment, physical or social; of selection in its various phases; and of those other disturbing factors, which, together with the direct and perhaps predominant influences of heredity, constitute the figure of man as he stands."

It is difficult to see where the line shall be drawn between hereditary influences and those which disturb the working of heredity. Go back in the history of mankind as far as anthropology can get, the differentiation of man from the animal kingdom is found to be a matter of more perfect adjustment to environment. Environment is the matrix, and to conceive man apart from environmental influences is as impossible as to conceive a cast without a mould. Heredity apart from environment has no meaning, since the present generation's whole inheritance is nothing but the sum of man's impact with environment in the past; and no anthropologist can get back to a time when man as he stood was not, exactly as he is to-day, a result of the three influences, social and physical

environment and heredity, the last of these factors being resolvable into influences of social and physical environment in the past generations *ad infinitum*. Even a "few decrees of Polish kings," if their consequence has been to depress the average stature of the Poles, have to that extent created a new sub-type of people; and the question whether we shall consider this sub-type a distinct race is not at all concerned with the cause of the differentiation, but with the amount of the differentiation itself. If the differentiation is considerable enough, we certainly have a distinct race, just as truly as we should have had, if the influence exerted by a political decree had been exerted by physical environment working for ten thousand years instead of a few decades. The only question is whether the differentiation has become ingrained and hereditary so far as succeeding generations are concerned, and whether it is sufficiently marked in character to constitute a race or sub-race, a type or sub-type, or only a variation too inconsiderable to be regarded in general classifications. In classifying populations, the anthropologist may of course, if he chooses, disregard those differentiations in extant population which are the immediate effect of environment and not transmitted to succeeding generations. Such differentiations may be disregarded so long as there is evidence that the inherent and permanently fixed race character is intact, and ready under a new environment to reassert itself. If the stature of a people has for generations been stunted by scant food supply or by other conditions unfavorable to physical development (such as employment of young children in factories, for instance), the anthropologist may disregard such modification of the race type, provided he believes the original type would reassert itself under other conditions,—not otherwise. The question does not concern the origin of the differentiation at all, but only its fixity,—its fixity, not with reference to past generations at all, but entirely with reference to future generations.

As already observed, anthropology attempts to eliminate all environmental influences, and to consider heredity pure and simple; but, wherever it draws the line, those ethnic traits or qualities which it sets down to the account of pure heredity are themselves no less the product of environment than the qualities which it disregards. The consequence of this quest for a residuum of race character, which may be regarded as the content of pure, disembodied, dematerialized heredity, has been the elimination of race character itself, and the substitution for it of what are conceived to be certain physical ear-marks of generation. Of these the cephalic index is the chief, because it is conceived to have offered the "greatest resistance to environmental influences." The mind and body and soul of the race, since they offer less resistance to environmental influences, may have changed in every essential character, if only the head retains its form; so that the head really becomes evidence, most certainly not of race, but merely of its own origin; and it may not be evidence of that, but simply of its own present existence. The essential quality of an ear-mark is that it shall be attached to something, and in this essential quality the ear-marks of anthropology fail. Why cephalic index, since it is dissociated from any essential traits, rather than size of the foot or length of limb or those creases in the palm of the hand which have given rise to the profundities of palmistry? \*

In sum, the term "race, or ethnic, factor," employed in anthropo-sociological writing, has not as yet received

\* Protest must also be entered against the method of deduction employed in anthropology. In any given population, if it appears that 60 per cent. have blond hair, or 75 per cent. or even 99 per cent., that fact does not enable the anthropologist to classify the 40 per cent. or 25 per cent. or even 1 per cent. which has not blond hair. So with regard to stature, the predominance of tall men in a population does not give any grounds for anthropological classification of the short individuals; nor does the predominance of blue eyes serve as a basis for classifying the persons whose eyes are not blue. If the cephalic index is an index of ethnic generation, it must be so for the population individ-



any definition which warrants its recognition as a scientific term. The ethnic factor in European populations to-day is the Holy Grail of modern anthropology: it is here, there, and everywhere, a mysterious apparition; and it is gone! If it could be grasped, it would solve all problems and breathe new life into all social philosophies. Even as the Christian socialist finds the ultimate solution of all economic problems in the propaganda of his interpretation of the Christian religion, as the anarchist finds his solution in the quality of human kindness which he conceives to be choked by government regulation, and as the socialist looks to the institution of an omnipotent beneficent government for his solution, so the anthropologist finds his in the generation of ethnic factors. But, alas! as applied to European population, the term "race" or "ethnic factor" remains an arbitrary and conventional, if not altogether visionary ideality.

#### IV.

The appearance of ethnic or race character in any population group is due to socialization of individual character, and is a natural consequence of isolation and selection of ancestry. Such isolation and selection may attach to

usually and severally, not collectively, since an average index may be entirely misleading; and where a population, such as that of Europe, is of heterogeneous character, there is no justification whatever for assuming that any single index is an index for the population as a whole.

We have not in the text at all considered the technical difficulties which have heretofore involved the application of anthropological tests of race origin,—difficulties which make any comparative study of the data got together almost impossible. Of these difficulties, such may be mentioned as, for example, those attaching to the establishment of any uniform color scale for determining accurately the degree of blondness or brunetness of a population; or such as attach to the various methods of taking head measurements for determining the cephalic index; not to mention individual variations and inaccuracies due to the great number of observers and recorders working independently of one another. Where the margins of variations are so slight, these difficulties are often sufficient to vitiate the whole train of reasoning based upon the comparative study of data.

social castes and classes within a population, creating natural types. The conditions of generation and inheritance within any isolated population group, however numerous or diversified in character it may be, tend normally to further the process of socialization, and so bring about ultimately an absolute uniformity of character. Such uniformity, where it manifests itself to-day, is, therefore, in itself no evidence of descent from homogeneous ancestry. The original progenitors need not have possessed any traits in common. But socialization of character in any isolated population group, while it is only a question of time and of a sufficient number of generations, in fact, never is completely accomplished. A large residuum of individual, unsocialized qualities always remains. If the process be conceived to be completed within any group, further progress or decline, evolution or devolution, must then depend upon environment; and selection necessarily ceases to be a matter of human choice. Such a state may well be designated the biological stationary state, and it is the state towards which all populations naturally tend. The population of the Chinese Empire may be cited as more nearly than any other exemplifying this state; for here is a population which has attained an advanced stage of civilization, wherein, however, all progress has ceased. No factors remain to be incorporated; and the Chinese seem helpless to modify the character of their civilization in any way, the process of elimination and selection being no longer operative. Here socialization has progressed so far as to equalize many of the sexual differences, and there would appear even to be a tendency for the qualities of youth and old age to fuse.

We may not, however, suppose the selection and diffusion of race qualities to proceed uninterruptedly or freely; and it is only intended here to note that the existence of ethnic groups in any considerable population is an evidence of socialization of character, and that this process

is at the basis of all natural generation. It is the process which has, in accordance with the principles of natural selection and evolution, built up and differentiated types and species throughout the natural world. Race character may have developed from a fusion of elements originally diverse or not; but, however diverse the original factors, from generation to generation they tend to combine and to disseminate themselves throughout the population, and to formulate themselves into a race character which comes to be transmitted from generation to generation. Ethnic character thus results from the socialization of individual character, and is evidence of a period of isolation.

Elementary ethnic, or race, character may be conceived as existing in the fundamentally human qualities, moral, intellectual, and physical, by which mankind differs from brute-kind. To these qualities, which are the common inheritance of the human race, others are added to constitute the individual a member of some particular ethnic group, and others, still, to constitute him an individual in that group. Whether the residuum of individualistic traits be large or small, the natural process of socialization tends to encroach upon and absorb more and more of them from generation to generation.

Obviously, the inheritance and transmission of character is a matter of immense complexity. Children inherit from both parents, and normally may be expected to partake equally of the character of both parents. As a matter of fact, however, children inherit very unequally from parents, the children of the same parents differing considerably in character according as they "take after" one or the other. Furthermore, the combination of excellences or of defects inherited by the child from both parents may and does result in the formation of entirely original character in the child. A child inheriting the excellences of both parents excels both, while one inheriting the

defects of both is a degenerate. Strictly speaking, except in those qualities where the parents resemble one another, the child need not normally, and probably will not really, resemble his parents at all. It is exactly in those qualities which the parents possess in common with one another that race character first manifests itself, and our problem is to show how these qualities become common.

While it is true that the child usually manifests a character which is original, that character, so far as it is inherited, is nevertheless determined by the character of parents. Its originality consists in the combination of selected traits of character. Individual variations may thus be very great. Yet in any considerable population they tend to offset one another, so that, to simplify the facts, they may be disregarded for the population as a whole, and the child treated as inheriting equally from both parents. On this supposition the process of race-character building is susceptible of simple statement. Every child represents a fusion of the original qualities of two individuals belonging to the preceding generation. Children of the third generation represent a fusion of original qualities possessed by four individuals constituting the original population; children of the next generation, eight; of the next, sixteen; and so on *ad infinitum*. But ultimately a generation is reached where intermarriage may occur without in any way affecting the formula of inheritance, since the population has come to possess its original progenitors as a common ancestry; and, consequently, no original combination of inherited traits can normally occur in the children of succeeding generations.

It need hardly be said that our conception of inheritance and transmission is here highly conventionalized for purposes of symmetry and simplicity. There is every reason to suppose that social groups within the original population would not intermarry freely, as supposed; and, if they did, it is not true that individuals born of similar parents

are similar. But, on the other hand, it must be borne in mind that the number of generations may be sufficiently great to neutralize eccentricities and break down social barriers. Our assumptions are, nevertheless, such as entirely to remove our train of reasoning from the real world; and we shall now attempt to work back into the complexity involving the problem of inheritance and transmission.

In the population of France, which we may take for illustration, we have to deal with a population of approximately forty millions, and one which does not, of course, intermarry with the freedom and regularity supposed,—a population within which classes persist in more or less complete isolation; in short, a population in which any such process as we have supposed is checked on every side, and which is receiving each year new factors for assimilation from immigration of foreigners. With such a population the establishment of a race character must extend over a considerable period of time, and can never be completed. The mere geographical distribution of the population would effectually prevent complete socialization of character, as would also the maintenance within the population of social and industrial groups between which intermarriage is slight.

Any considerable population, such as that of France, may be descended from some originally monogenous race group, or the various social classes within it may be so descended. As these original groups are broken up, the race character appears, at first in simple fundamental characteristics, and gradually it extends to more complex attributes of character. In any population of forty millions, however, individual ancestry may vary greatly; and what is true of race character is true of individual character,—it is determined chiefly by individual ancestry, just as race character is determined by race ancestry. A recent French writer has well said that, of those influ-

ences which determine individual character and conduct, that which is transmitted from one's ancestors is most important, the inheritance from one's immediate parents being second, while the influence of one's immediate social and physical environment is of least importance.

The real process of ethnic generation is thus seen to bear no resemblance to the process elaborated in modern anthropology. Ethnic factors cannot be conceived as existing in solution in extant populations: every generation creates new ethnic qualities; and every generation is a generation of race, a new ethnic creation determined in past generations, and in itself certainly determining the character of future generations. When, however, a fusion of ethnic factors occurs, the original factors are not held in solution in future generations: they are annihilated in a new creation of ethnic character, which may not resemble the original factors at all. The present population groups of Europe do not hold in solution ethnic factors which may be traced back from generation to generation,—at least in no other sense than the sense in which it may be said of the Gulf of Mexico that it is composed of the Mississippi and Missouri Rivers, with their tributaries, and other rivers flowing into the Gulf. One might almost as well seek to reconstruct the Mississippi River from an analysis of sea water as seek to reconstruct original ethnic factors in the population of Europe from an analysis of extant population or from mechanical measurements unrelated to the really essential race qualities.

It is, of course, true that these suffusions of ethnic character have taken place in accordance with natural laws,—just as the mingling of the fresh waters poured into the Gulf has occurred in accordance with physical laws,—and these are in the last analysis the workings of the forces determining social evolution, natural selection, and survival. It is only the complex workings of these forces which give the appearance of chance here, as in

the sequence of combinations in a kaleidoscope. There is, of course, no other sort of chance than that which signifies ignorance of causes or inability to analyze the workings of laws. So, for all practical purposes, social evolution must remain a matter of chance so long as the forces back of it lie beyond our control or escape our scrutiny or accurate determination.

It is our peculiar privilege, living at the present day, to follow the course of human events, as they are recorded in history, for a longer period of time than any other generation of men has ever been able to do. Written records made thousands of years ago are receiving their more and more correct translation into written history, and anthropologists are now literally unearthing the history of man through indefinitely long geological periods. They find human skeletons and fossils imbedded in river and cave, deposits which establish beyond doubt that man was a contemporary in Europe of the mammoth mastodon and the woolly rhinoceros, the cave hyena, and other uncanny creatures unknown to-day except by their fossil remains or preserved bones. They trace the progress of man as a sort of wild animal living in natural caves, using rough stone implements, through entire geological periods so remote and so extended that the most ancient of Egyptian monuments seem, in comparison, a work of yesterday. This history reaches back into the animal kingdom until its ages are measured, not in thousands of years, nor in hundreds of thousands of years, but in inconceivable millions. No generation before our own has delved so deep in the past. None has been able to get back so far, nor able to conceive history as we do to-day. It has been reserved for our age to write out the history not of our own time and people alone, but of the human race itself; to follow the rise of social institutions and their decline; to see peoples become civilized and sink back into barbarism. We find this process of rise, supremacy, and dissolution

so often repeating itself that we have come to conceive societies, like individuals, to have their natural periods of growth, majority, and decrepitude. The conception of society as an organism, so common among sociologists to-day, lends further sanction to this idea that every society has a natural life-period which it lives through, if it is not cut off unnaturally; that this period varies from society to society, as does the duration of life from individual to individual, but that, given the vital initial social energies in any community, its normal life-period is thereby determined. In the succession of social institutions, civilization has moved painfully and uncertainly, now forward, now sinking beneath a flood of barbarism, and again emerging. The toilsome progress has been one of displacement, of crowding out, of suffusion of new strains of blood, of social rape, assimilation, and slavery. The advance which we call evolution has been like the movement of a wave along the beach, dissipated into foam and spray, gathering into its recoil some few fragments, and yielding its forward impulse to succeeding breakers. In the development of the human race the ethnic factor is the surface wave, a ripple sweeping over the face of the social deep, causing it to bubble and swirl, and to rise upon its crest,—but for a moment only. The fundamental traits of the natural man as he stands to-day, of whatever genealogy or race,—are they not primarily these of the gorilla clothed and become gregarious? These natural traits constitute the continent against which ethnic waves have been beating and wearing, working imperceptible metamorphoses.

How unreal and academic the interpretation given to this process of natural generation in modern anthropology, more particularly when that interpretation is applied to the great population movements of this century! Anthropology has undertaken to interpret those movements in terms of ethnic generation and selection in face of the



obvious fact that those movements have been almost entirely an economic consequence, and that economic development during this period has tended, and tends more and more, not to dissociate, select, and establish ethnic factors, but, on the contrary, to break down all natural differentiations, to break up and obliterate ethnic stratification, and to substitute a classification and hierarchy of social groups dependent upon economic efficiency and function. The economic standard of worth does not recognize the ethnic factor; nor are ethnic lines, even where they are discernible, at all observed in the composition of any of our social or industrial groups, certainly not in that great industrial group which has contributed most to the numerical increase of population during the century,—the wage-earning group.

If now it be asked, What is the clear duty of the anthropologist in elaborating a theory of population? it must be replied that his task is to present the facts, not idealities,—not to assert unities which have no existence in the diversities of fact, not to simplify his scheme of classification till it loses all definition or relation to reality, and, above all, not to generalize on meagre and partial data. Anthropologists began their work with an attack upon the old notions regarding the races of man. They made clear the inadequacy of that naïve classification which conceived mankind to be composed of white, black, yellow, red, and brown races,—of Caucasian, Indo-European, and Germanic races. It is unfortunate the anthropologists should now have fallen into the same error themselves, and attempt to resolve the heterogeneous population of Europe, which they rightly conceive to be “the most mixed population in the world,” into three simple ethnic factors. A glance at the composition of any of our social groups, from the urban slum populations upwards, shows that ethnical cleavage runs vertically through them all, and demonstrates the deceptive character of any idea such

as that implied in the term "ethnic stratification," or horizontal cleavage. The old notion of race had at least some basis in natural science. The black people of the earth certainly are sufficiently differentiated from the white to warrant the statement that they form a race distinct,—a race which exists, not in the mind of an anthropologist, but in swarms of millions of people. So of the yellow races, so to a lesser extent of the other naïve races. The idealities of modern anthropology, however, have but a narrow basis, if any, in natural history. And, finally, even if the races of the modern anthropology ever had any existence outside the mind of the modern anthropologist, they ceased to exist long since. They have fused with one another indiscriminately. The physical ear-marks of race have gone one way, while the mental attributes of race have gone another. Anthropologists do not present any data to justify the assumption that the cephalic index carries any mental attribute or any character with it; nor can any such contention be maintained in the face of modern psychology, which more and more is coming to regard the head-form as irrelevant to mental capacity or character, certainly where the size of the brain is disregarded. Phrenology, like astrology, has had its day; and the sort of racial phrenology with which modern anthropologists are engaged is bound to go to the same limbo. Sociology may then breathe again naturally.

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